

**REMARKS**

Applicant respectfully requests reconsideration. Claims 1-2, 12, 14, 16-17, 22, 24, 26-27, 44, 49, 66-67, 97-98 and 100 were previously pending in this application. Claim 100 was amended herein to remove SEQ ID NO. 314. As a result, claims 1-2, 12, 14, 16-17, 22, 24, 26-27, 44, 49, 66-67, 97-98 and 100 are still pending for examination with claims 1, 44, 49, 66, 67, 97 and 98 being independent claims. No new matter has been added.

***Information Disclosure Statement***

Applicant thanks the Examiner for considering the Information Disclosure Statements and accompanying 1449 forms previously filed.

***Election/Restrictions***

Applicant acknowledges and thanks the Examiner for the clarification that claims 1-2, 12, 14, 16-17, 22, 24, 26-27, 44, 49, 66-67, 97-98 and 100 are pending for examination.

***Double Patenting Rejection***

The rejection of claim 49 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Application No. 11/361,313 has been maintained. Applicant acknowledges that the non-statutory double patenting rejection is maintained on record until such time as it is properly addressed.

***Rejection Under 35 U.S.C. § 102***

While the Examiner accepted Applicant's arguments presented in the previous response to Office Action (Office Action page 5), the Examiner maintained the rejection of claims 1-2, 12, 14, 16-17, 22, 24, 26-27, 49, 66-67, 97-98 and 100 under 35 U.S.C. § 102(b) as allegedly being

anticipated by Krieg et al. WO/01/22972 A2. The Examiner contended that the cited publication teaches each and every feature of the instantly claimed invention. This contention is respectfully traversed for the reasons presented below.

Contrary to the Examiner's assertion, the WO/01/22972 A2 by Krieg et al. does not anticipate the instant claims because the cited reference does not teach each and every element of the claimed invention. The cited reference merely teaches that an immunostimulatory oligonucleotide *may include* a chimeric backbone, e.g., a backbone comprising phosphodiester in part and phosphorothioate in part. The cited reference does not specifically teach that the phosphodiester linkage be placed at a specified position. In addition to this generic limitation, however, the instant claims require a further limitation. The instant claims specify that "at least one internal YZ dinucleotide has a phosphodiester or phosphodiester-like internucleotide linkage." Thus, not only the oligonucleotide of the claimed invention comprises a chimeric backbone, but also it is required to have a phosphodiester or phosphodiester-like linkage *at the specified position* (i.e., at least one internal YZ dinucleotide).

This is based on the discovery, which was first recognized by Applicant, as disclosed in the instant application, that having a phosphodiester internucleotide linkage at the YZ dinucleotide position (e.g., between C\_G), not only did not adversely affect the immunostimulatory activity of the oligonucleotides but in some cases resulted in enhanced immunostimulatory activity. This was a surprising finding and was counterintuitive, because it was known in the art that a phosphodiester linkage is more susceptible to nuclease-mediated degradation, and therefore, having a phosphodiester linkage at the CpG dinucleotide motif would be expected to result in the breakage of the oligonucleotide at the site, destroying the immunostimulatory motif. Nevertheless, it was discovered that placing a phosphodiester between the C and the G in an otherwise phosphorothioate-modified oligonucleotide did not result in a loss of immunostimulatory activity. Based at least in part on this finding, the instant invention is drawn to an immunostimulatory nucleic acid molecule having at least one internal pyrimidine-purine (YZ) dinucleotide and a chimeric backbone, *wherein the at least one internal YZ dinucleotide has a phosphodiester or phosphodiester-like internucleotide linkage.*

Applicant fails to find the teaching of a YZ motif having a phosphodiester or phosphodiester like linkage in the cited reference. Rather, the oligonucleotides of the cited reference represent a genus of immunostimulatory oligonucleotides that encompasses the species of oligonucleotides provided in the instant disclosure.

Applicant respectfully submits that the case law is clear in that a prior art reference that teaches a genus does not anticipate all species of a later claimed invention. See, for example, *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1367, 71 USPQ2d 1081, 1091 (Fed. Cir. 2004) (explaining that "[a] prior art reference that discloses a genus still does not inherently disclose all species within that broad category." Thus, because the cited reference does not teach every limitation of the instant claims, a *prima facie* case of anticipation has not been established. Applicant respectfully submits that the instantly claimed invention is novel. Accordingly, reconsideration and withdrawal of the rejection made under 35 U.S.C. §102 are respectfully requested.

Based on the foregoing, Applicant believes that the instant claims are now in an allowable condition. A favorable response is earnestly solicited.

**CONCLUSION**

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. C1037.70048US00

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Respectfully submitted,

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